

AMENDMENTS TO THE CLAIMS

1-32 (Canceled)

33. (Amended) A phosphorylatable antibody or antigen binding fragment thereof, engineered to include at least one heterologous kinase recognition site located in the hinge region and which does not ~~adversely affect~~ reduce the ability of the antibody or antigen binding fragment to bind antigen, such that an added phosphate group of a phosphorylated form of the antibody or antigen binding fragment is protected from hydrolysis by intramolecular interactions with other amino acid residues so that at least 80% of all the phosphate groups of the phosphorylated form remain attached ~~after at least 5 days of incubation in vitro of the phosphorylated form~~ after incubation for 5 days at 37 °C in either (i) human, mouse or fetal serum, or (ii) phosphate buffered saline with 5 mg/ml bovine serum albumin in animal serum or buffer.

34. (Canceled)

35. (Previously Presented) The phosphorylatable antibody of claim 33, wherein at least 95% of all the phosphate groups remain attached after at least 5 days of incubation of the phosphorylated form in animal serum or buffer.

36. (Previously Presented) The phosphorylatable antibody of claim 35, wherein at least 99% of all the phosphate groups remain attached after at least 5 days of incubation of the phosphorylated form in animal serum or buffer.

37. (Previously Presented) The phosphorylatable antibody of claim 33, wherein the kinase recognition site is a recognition site for kinase which phosphorylates a serine, threonine or tyrosine residue.

38. (Previously Presented) The phosphorylatable antibody of claim 33, wherein the kinase recognition site is a recognition site for a cyclic AMP dependent kinase, a cyclic GMP dependent kinase, or a cyclic nucleotide independent kinase.

39. (Previously Presented) The phosphorylatable antibody of claim 33, wherein the kinase recognition site is a recognition site for casein kinase I, casein kinase II, Src tyrosine kinase, mitogen-activated S6 kinase or rhodopsin kinase.
40. (Previously Presented) The phosphorylatable antibody of claim 33, wherein the antibody is a monoclonal antibody.
41. (Previously Presented) The phosphorylatable antibody of claim 33, wherein the antibody is a humanized antibody, or chimeric antibody.
42. (Previously Presented) The phosphorylatable antibody of claim 33, wherein the antigen binding fragment comprises a Fab fragment, or Fab' fragment.